IN THE CLAIMS:

1. (Previously Presented) A position detection system comprising a position pointer including at least one coil, for pointing to a position, and a position detector for detecting the position pointed to by the position pointer by transmitting and receiving a signal to and from the position pointer by means of electromagnetic coupling,

the position detector comprising:

a plurality of transmission coils for transmitting a position pointer exciting signal to the position pointer;

a plurality of sensor coils for receiving a position indicating signal transmitted from the position pointer in response to the position pointer exciting signal;

signal transmission means for selecting one of the plurality of transmission coils in accordance with the position of the position pointer indicated by the position indicating signal and for driving the selected transmission coil so as to transmit the position pointer exciting signal to the position pointer;

reception means for selecting the plurality of sensor coils one by one and receiving the position indicating signal transmitted from the position pointer; and

position detection means for detecting the position pointed to by the position pointer in accordance with the position indicating signal received by the reception means,

wherein, depending on a relative spatial relationship between the selected transmission coil and the position of the position pointer detected by the position detection means, the signal transmission means drives the selected transmission coil such that the phase of the position pointer exciting signal supplied to the position pointer is maintained without being inverted.

2. (Original) A position detection system according to claim 1, wherein the plurality of transmission coils are disposed so as to be coaxial with each other.

3. (Previously Presented) A position detection system according to claim 1, wherein the signal transmission means defines a plurality of sub areas in a sensor area in which the plurality of transmission coils are disposed, selects a transmission coil capable of supplying a strongest position pointer exciting signal to the position pointer depending on a particular sub area in which the position pointer is located, and drives the selected transmission coil thereby supplying the position pointer exciting signal to the position pointer.

4. (Cancelled)

5. (Previously Presented) A position detection system according to claim 41, wherein, depending on whether the position pointer is located in the inside or the outside of the selected transmission coil, the signal transmission means inverts the phase of the position pointer exciting signal by which to drive the transmission coil such that the position pointer exciting signal supplied to the position pointer is maintained unchanged in terms of its phase.

6. (Original) A position detection system according to claim 1, wherein the plurality of transmission coils include a first transmission coil and a second transmission

coil disposed outside the first transmission coil, the first and second transmission coils being coaxial with each other.

7. (Previously Presented) A position detection system according to claim 6, wherein three sub areas are defined in a sensor area in which the position of the position pointer is detectable, the three sub areas including a first area in which when the signal to detect the position is transmitted in a first phase, the first transmission coil is capable of transmitting the position pointer exciting signal with a greater signal level than the second transmission coil, a second area in which when the position pointer exciting signal is transmitted in the first phase, the second transmission coil is capable of transmitting the position pointer exciting signal with a greater signal level than the first transmission coil, and a third area in which when the position pointer exciting signal is transmitted in a second phase opposite to the first phase, the first transmission coil is capable of transmitting the position pointer exciting signal with a greater signal level than the second transmission coil,

and wherein the signal transmission means transmits the position pointer exciting signal in the first phase from the first transmission coil when the position pointer is located in the first area, the signal transmission means transmits the position pointer exciting signal in the first phase from the second transmission coil when the position pointer is located in the second area, and the signal transmission means transmits the position pointer exciting signal in the second phase from the first transmission coil when the position pointer is located in the third area.

8. (Previously Presented) A position detection system according to claim 7, wherein the reception means sequentially selects a predetermined number of sensor coils located in the first area and an area adjacent to the first area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the first area, the reception means sequentially selects a predetermined number of sensor coils located in the second area and an area adjacent to the second area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the second area, and the reception means sequentially selects a predetermined number of sensor coils located in the third area and an area adjacent to the third area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the third area.

9. (Previously Presented) A position detector that transmits and receives a signal to and from a position pointer including at least one coil for pointing to a position thereby detecting the position pointed to by the position pointer, the position detector comprising:

a plurality of transmission coils for transmitting a position pointer exciting signal to the position pointer;

a plurality of sensor coils for receiving a position indicating signal transmitted from the position pointer;

signal transmission means for selecting one of the plurality of transmission coils in accordance with the position of the position pointer indicated by the position indicating signal and for driving the selected transmission coil so as to transmit the position pointer

exciting signal to the position pointer;

reception means for selecting the plurality of sensor coils one by one and receiving the position indicating signal transmitted from the position pointer; and

position detection means for detecting the position pointed to by the position pointer in accordance with the position indicating signal received by the reception means.

10. (Original) A position detector according to claim 9, wherein the plurality of transmission coils are disposed so as to be coaxial with each other.

11. (Previously Presented) A position detector according to claim 9, wherein the signal transmission means defines a plurality of sub areas in a sensor area in which the plurality of transmission coils are disposed, selects a transmission coil capable of supplying a strongest position pointer exciting signal to the position pointer depending on a particular sub area in which the position pointer is located, and drives the selected transmission coil thereby supplying the position pointer exciting signal to the position pointer.

12. (Previously Presented) A position detector according to claim 9, wherein depending on a relative spatial relationship between the selected transmission coil and the position of the position pointer detected by the position detection means, the signal transmission means drives the selected transmission coil such that the phase of the position pointer exciting signal supplied to the position pointer is maintained without being inverted.

13. (Previously Presented) A position detector according to claim 12, wherein depending on whether the position pointer is located in the inside or the outside of the selected transmission coil, the signal transmission means inverts the phase of the position pointer exciting signal by which to drive the transmission coil such that the position pointer exciting signal supplied to the position pointer is maintained unchanged in terms of its phase.

14. (Original) A position detector according to claim 9, wherein the plurality of transmission coils include a first transmission coil and a second transmission coil disposed outside the first transmission coil, the first and second transmission coils being coaxial with each other.

15. (Previously Presented) A position detector according to claim 14, wherein three sub areas are defined in a sensor area in which the position of the position pointer is detectable, the three sub areas including a first area in which when the position pointer exciting signal is transmitted in a first phase, the first transmission coil is capable of transmitting the position pointer exciting signal with a greater signal level than the second transmission coil, a second area in which when the position pointer exciting signal is transmitted in the first phase, the second transmission coil is capable of transmitting the position pointer exciting signal with a greater signal level than the first transmission coil, and a third area in which when the position pointer exciting signal is transmitted in a second phase opposite to the first phase, the first transmission coil is capable of

transmitting the position pointer exciting signal with a greater signal level than the second transmission coil,

and wherein the signal transmission means transmits the position pointer exciting signal in the first phase from the first transmission coil when the position pointer is located in the first area, the signal transmission means transmits the position pointer exciting signal in the first phase from the second transmission coil when the position pointer is located in the second area, and the signal transmission means transmits the position pointer exciting signal in the second phase from the first transmission coil when the position pointer is located in the third area.

16. (Previously Presented) A position detector according to claim 15, wherein the reception means sequentially selects a predetermined number of sensor coils located in the first area and an area adjacent to the first area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the first area, the reception means sequentially selects a predetermined number of sensor coils located in the second area and an area adjacent to the second area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the second area, and the reception means sequentially selects a predetermined number of sensor coils located in the third area and an area adjacent to the third area and receives the position indicating signal transmitted from the position pointer when the position pointer is located in the third area.

17. (Previously Presented) A power conserving position detector that transmits

and receives a signal to and from a position pointer including at least one coil for pointing to a position thereby detecting the position pointed to by the position pointer, the position detector comprising:

a plurality of transmission coils for transmitting a position pointer exciting signal to the position pointer, each of said plurality of transmission coils comprising a resonant circuit tuned to resonate at a selected resonant frequency;

a plurality of sensor coils for receiving a position indicating signal transmitted from the position pointer in response to the position pointer exciting signal;

signal transmission means for selecting one of the plurality of transmission coils in accordance with the position of the position pointer indicated by the position indicating signal and driving the selected transmission coil with a pulsed carrier signal at said selected resonant frequency so as to transmit the position pointer exciting signal to the position pointer for detecting the position of the position pointer;

reception means for selecting the plurality of sensor coils one by one and receiving the position indicating signal transmitted from the position pointer; and

position detection means for detecting the position pointed to by the position pointer in accordance with the position indicating signal received by the reception means.

18. (Original) The power conserving position detector according to claim 17, wherein the plurality of resonant transmission coils are disposed so as to be coaxial with each other.

19. (Previously Presented) The power conserving position detector

according to claim 17, wherein the signal transmission means defines a plurality of sub areas in a sensor area in which the plurality of transmission coils are disposed, selects a transmission coil capable of supplying a strongest position pointer exciting signal to the position pointer depending on a particular sub area in which the position pointer is located, and drives the selected transmission coil with said pulsed carrier signal thereby supplying the position pointer exciting signal to the position pointer.

20. (Previously Presented) The power conserving position detector according to claim 17, wherein depending on a relative spatial relationship between the selected transmission coil and the position of the position pointer detected by the position detection means, the signal transmission means drives the selected transmission coil such that the phase of the pulsed carrier position pointer exciting signal supplied to the position pointer is maintained without being inverted.

21. (Previously Presented) The power conserving position detector according to claim 17, wherein said position detection means is configured to provide user input data to a portable data processing device.

22. (Previously Presented) The power conserving position detector according to claim 17, wherein said position detection means is configured to provide user input data to a personal digital assistant

23. (Previously Presented) The power conserving position detector according to claim 17, wherein said position detection means is configured to provide user input data to a mobile telephone.

24. (Previously Presented) The power conserving position detector according to claim 17, wherein said position detection means is configured to provide user input data to a personal computer.

25. (Previously Presented) A method for transmitting an electromagnetic wave from a position detector to a position pointer carrying a resonant circuit, comprising:

(a) providing, in the position detector, a plurality of sensor coils defining a sensor area and at least one transmission coil for transmitting a signal to detect the position of the position pointer, the transmission coil being arranged in the sensor area in an overlapping manner with the sensor coils, the transmission coil comprising a resonant circuit tuned to resonate at a selected resonant frequency;

(b) energizing the transmission coil with a pulsed carrier signal at the selected transmission coil resonant frequency for inducing current in the transmission coil in a first direction when the position pointer is detected in a first region of the sensor area and inducing current in the transmission coil in a second direction when the position pointer is detected in a second region of the sensor area; and

(c) receiving the pulsed carrier signal in the position pointer resonant circuit and, in response, radiating a pulsed position pointer signal.

26. (Previously Presented) The method of claim 25, further comprising:

(d) receiving the pulsed position pointer signal in the position detector sensor coils.

27. (Previously Presented) The method of claim 25, wherein the step of providing the at least one transmission coil comprising a resonant circuit comprises providing an inductive transmission coil connected in series with a capacitor.

28. (Previously Presented) The method of claim 25, wherein the step of providing the at least one transmission coil comprises providing first and second transmission coils, the first transmission coil being wound proximate to the periphery of the position detector sensor coils along a first path; and

wherein the second transmission coil is wound proximate to the periphery of the position detector sensor coils along a second path not coextensive with said first path.

29. (Previously Presented) The method of claim 28, further comprising:

(d) energizing solely the first transmission coil with the pulsed carrier signal at the selected resonant frequency; and

(e) energizing solely the second transmission coil with the pulsed carrier signal at the selected resonant frequency.

30. (Currently Amended) A position detector for detecting a position of a

position pointer, the detector comprising:

a sensor area defined by a plurality of sensor coils for sensing a position indicating signal transmitted from the position pointer;

a reception unit for determining a position of the position pointer based on the sensed position indicating signal;

a plurality of transmission coils for transmitting a pointer exciting signal to the position pointer, said transmission coils disposed to, at least partially, overlap with said sensor coils in said sensor area, said transmission coils and said sensor coils being different coils; and

a transmission coil selector for selectively driving current in said transmission coils so that the pointer exciting signal transmitted to the position pointer maintains the same polarity regardless of the position of the position pointer with respect to the sensor area.